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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,823	06/27/2003	Paul Leblans	27500-161	8419

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EXAMINER	
GAGLIARDI, ALBERT J	
ART UNIT	**PAPER NUMBER**
2884	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/607,823	LEBLANS, PAUL	
	Examiner	Art Unit	
	Albert J. Gagliardi	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-97* is/are pending in the application.

4a) Of the above claim(s) *61-97* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Comment on Submissions

1. This action is responsive to submissions of 17 November 2005.

Election/Restrictions

2. Newly submitted claims 61-97 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Newly submitted claims are directed to a combination invention utilizing a specific storage phosphor (classifiable in at least 250/483.1) with a specific x-ray system (classifiable in at least 378/97).

In addition, the newly submitted claims include a reference to a specific storage phosphor that includes critical limitations (i.e. limitations relating to a support layer with a specific thickness) that were not recited in the original claims.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 61-97 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

4. Claims 29-30 are objected to because of the following informalities:

In claims 29 and 30, the term "method" following "laminating" should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, and 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitations relating to an "exposure side" is new matter.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, and 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, and are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the claims as amended include limitations relating to an "exposure side" but it is not clear what element the "exposure side" is related to.

In one portion of the claim, the limitation refers to a phosphor layer on an "exposure side of CsBr:Eu . . . on a support," but the CsBr:Eu *is the phosphor layer*. It is unclear how the phosphor layer may be deposited on itself.

The examiner notes that interpreting the "exposure side" to relate to the support seems improper because the expression should be "of a support," not "on a support."

The examiner also notes that the term "exposure side" is unclear because is no necessary antecedent basis for an "exposure." Although the examiner could surmise that the "exposure side" refers to a side of a support exposed to a vacuum deposition process, it is equally possible that the "exposure side" refers to an x-ray "exposure side" of the storage phosphor panel, or perhaps to the readout "exposure side" of the phosphor panel. Such interpretations would be consistent with the typical application of such storage panels, but the is no antecedent basis in the claim for an x-ray or light readout source.

The remaining claims are rejected on the basis of their dependency.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-2, 29-30 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hell *et al.* (US 2001/0007352 A1) in view of Homme *et al* (US 2001/0030291 A1) and Okada *et al.* (US 2002/0162965 A1)

Regarding claims 1-2, as best understood, *Hell* discloses a binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer (par.0020) of CsBr:Eu (par.0031) on a support wherein the support includes a layer of, for example, glass or aluminum material (par.0043).

Regarding an amorphous carbon support, although not specifically disclosed, those skilled in the art appreciate supports such as amorphous carbon as well known in the art (see for

example *Homme* at par. 0041). Therefore, absent some degree of criticality, the use of a carbon support would have been an obvious design choice in view of the known functional equivalence thereof. In addition, *Okada* discloses that amorphous carbon has advantages over aluminum and glass in that it has low absorption (and consequently low backscatter), good medicine resistance, and high heat resistance (par. 0009-0014).

Regarding the concentration of Eu versus CsBr, *Hell* discloses a specific example wherein the Eu concentration is on the order of 800 ppm (par. 0050) and that the Eu concentration can vary over several orders of magnitude (see for example par.0038 wherein the ratio maybe in a range of 10^{-3} to 5 mol %), which suggests a range that encompasses the recited range of 100 to 400 ppm or 100 to 200 ppm. As such, Eu concentrations in the range of 100 to 400 ppm or 100 to 200 ppm are considered obvious design choices within the skill of a person of ordinary skill in the art depending on the needs of the application.

Note: regarding the limitations relating to an "exposure side", the examiner notes that such limitations are so unclear as to render any meaningful examination of the limitations. Regardless of the meaning, the examiner notes that, at best, the limitations related to an "exposure side" relate to a function, and do not suggest any specific structural limitation. See MPEP 2114 noting that:

Apparatus claims must be structurally distinguishable from the prior art. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). Apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). See MPEP 2114.

Regarding claims 29-30, the method as recited according to claims 29-30 is suggested by the apparatus as suggested by *Hell*, *Homme*, and *Okada* as applied above, and are rejected accordingly.

Regarding claims 33-34, as best understood, the use of storage phosphor panels and screens are well known for use in a variety of medical imaging applications including mammography.

Note: Even though the claims recite exposing an object to x-radiation, and by incorporation of the limitations in claim 1, suggest an screen or panel with an exposure side, it is not necessarily clear that the limitations are related, and even if they are related, the exact nature of the method is still unclear since the claims do not explicitly include any limitations related to the positioning of the panel or screen in relation to the x-ray source. Such limitations will not be implied.

11. Claims 3-28, 31-32 and 35-60, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over *Hell*, *Homme*, and *Okada* as applied above, and further in view of Willems *et al.* (US 5,736,069).

Regarding claims 3-20, *Willems* discloses that substrates for storage phosphor panels may include a variety of auxiliary and additional layers including polymeric layers and reflective aluminum layers and wherein the additional layers may be formed as interlayers and/or backing layers on the substrate (col. 5, line 52 to col. 6, line 9). W*illems* teaches that such layers may be used for a variety of purposes including improving bonding, sensitivity, sharpness etc. (col. 5, lines 52-58). Those skilled in the art also appreciate that the provision of additional layers for strength, protection, scratch resistance, anti-static and anti-friction purposes are also well known.

Therefore the use of additional layers including a polymeric layer, a reflective aluminum layer and/or a protective layer would have been an obvious design choice in order to improve operation of the storage phosphor panel. Absent some degree of criticality, the particular thickness of any of the layers would be a matter of routine design choice within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Regarding claims 21-28, *Okada* further discloses the use of protective layers comprising parylene (par.0079). Absent some degree of criticality, the use of parylene C, D or HT is view as a matter of routine design choice.

Regarding claims 31-32, *Willems* further suggests the use of a specularly reflective aluminum layer (col. 6, line 1-2). Absent some degree of criticality, the order at which the aluminum layer is deposited is viewed as a matter of routine design choice depending on the needs of the application.

Regarding claims 35-60, as best understood, the use of storage phosphor panels and screen are well known for use in a variety of medical imaging applications including mammography.

Response to Arguments

12. Applicant's arguments filed 17 November have been fully considered but they are not persuasive.

13. Regarding applicants arguments that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., specific use for mammography) are not recited in the rejected apparatus claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14. Regarding applicants arguments regarding the burden of assembling a cassette with transparent materials, it is noted that the features upon which applicant relies (i.e., a cassette) are not recited in the rejected apparatus claim(s).

15. Regarding applicant's argument that *Okada* is specific to a scintillator panel with a base on the exposure side, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, *Okada* is cited merely for the teaching of the known functional equivalent use of carbon supports, in general, and the advantages thereof over other known materials such as glass or aluminum, not for the specific design or orientation of the panel.

16. Regarding applicant's argument that even though *Homme* teaches the use carbon supports, one would have no basis for selecting carbon from a list of equal options, the examiner notes that an express suggestion to substitute one equivalent component or process for another is not necessary to render such a substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). See MPEP 2144.06. In addition, such argument in unfounded in view the express motivations suggested by *Okada*.

17. Regarding applicant's arguments regarding the orientation of the storage panel generally, the examiner notes that those skilled in the art generally appreciate that it is well known in the art

to arranged storage phosphor panels so as to have the phosphor layer towards the exposure source (see for example Homme – US 2004/0000644 A1 – disclosing a typical orientation of a storage panel at Figs. 5-6 as compared to scintillator and/or image pickup panels as shown at Figs. 1 and 3). The examiner further notes that *Homme '644* also discloses the known functional equivalent use of amorphous carbon as a base layer (par. 0036).

18. In regards to applicant's request for support that the use of storage phosphor screens in mammography applications is known in the art, the examiner cites Cresens *et al.* – US 2001/0030301 A1 – at pars. 0052-0053).

19. All of applicants arguments having been addressed, the rejection is maintained.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Albert J. Gagliardi
Primary Examiner
Art Unit 2884

AJG